IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

3M COMPANY and 3M INNOVATIVE PROPERTIES COMPANY, Plaintiffs, v. AMPHENOL CORP., Defendant.	)	C.A. No. ____________ **DEMAND FOR JURY TRIAL**

COMPLAINT FOR PATENT INFRINGEMENT

3M Company and 3M Innovative Properties Company (collectively, "3M" or "Plaintiffs"), by their attorneys and for their Complaint against Defendant Amphenol Corp. ("Amphenol" or "Defendant"), allege as follows:

NATURE OF THE ACTION

1. 3M is a leading innovator and provider of high performance, shielded ribbon cables for data transmission. 3M has received multiple patents in areas of innovation covering key aspects of this technology. For example, one aspect of 3M's technology facilitates the use of high performance cables in space-constrained systems with minimal signal loss or performance impact. Additional aspects of 3M's technology address physical dimensions concerning the layout of the shielded ribbon cable structure. These important features, and others, were disclosed by 3M to the public in connection with patent applications. The United States Patent and Trademark Office assessed 3M'S technical contributions, examined the content of those patent applications, and awarded 3M with United States Patent Nos. 8,933,333 ("the '333 Patent") and 9,601,236 ("the '236 patent").

2. Upon information and belief, Amphenol is now manufacturing, using, offering for sale and/or importing shielded ribbon cables ("Shielded Ribbon Cables") into the United States that use 3M's technology in direct competition with 3M.

3. Upon information and belief, Amphenol's Shielded Ribbon Cables are also incorporated into servers sold within the United States and/or imported into the United States. Figure 1 below depicts examples of Amphenol's Shielded Ribbon Cables, which use 3M's patented technology, retrieved by 3M from products sold in the United States.

Figure 1

4. Upon information and belief, Amphenol has targeted and/or concentrated on the United States by offering its Shielded Ribbon Cables for sale directly and or indirectly through third parties who Amphenol reasonably knows will incorporate the Amphenol Shielded Ribbon Cables into products imported into or otherwise sold in the United States.

5. This is an action for patent infringement of 3M's '333 Patent and '236 patent under the patent laws of the United States, 35 U.S.C. §§ 271, 281-285. 3M brings this action to stop Amphenol's infringing activities and to recover damages suffered by 3M due to Amphenol's infringement. Moreover, Amphenol's infringement will irreparably harm 3M, which has devoted significant resources to its patent-protected technology, commercial products, and brand. 3M also seeks preliminary and permanent injunctive relief against Amphenol.

THE PARTIES

6. Plaintiff 3M Company ("3M Co.") is a corporation organized and existing under the laws of the state of Delaware, and having its principal place of business at 3M Center, St. Paul, Minnesota 55133.

7. Plaintiff 3M Innovative Properties Company ("3M IPC") is a wholly-owned subsidiary of 3M Company with its principal place of business at 3M Center, St. Paul, Minnesota 55133.

8. Defendant Amphenol Corp. ("Amphenol"), upon information and belief, is a corporation organized and existing under the laws of the state of Delaware, and having its principal place of business at 358 Hall Avenue, Wallingford, Connecticut 06492.

JURISDICTION AND VENUE

9. This action arises under the patent laws of the United States, including 35 U.S.C. § 271.

10. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

11. This Court has personal jurisdiction over Amphenol because it is incorporated under the laws of the State of Delaware.

12. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b).

3M'S PATENTS-IN-SUIT

U.S. Patent No. 8,933,333

13. On January 13, 2015, the '333 Patent entitled "Shielded Electrical Cable," was duly and legally issued by the United States Patent and Trademark Office to inventor

Douglas B. Gundel. A true and correct copy of the ’333 Patent is attached as Exhibit A to this Complaint.

14. The ’333 Patent relates generally to the field of electrical cables for transmitting data. The claims of the ’333 Patent are directed to shielded electrical cables that may be bent at various angles without losing the integrity of the electrical signal.

15. The ’333 Patent is currently in full force and effect.

16. All right, title and interest in and to the ’333 Patent have been assigned to 3M IPC, which is the sole owner of the ’333 Patent.

17. 3M Co. is the exclusive licensee of the ’333 Patent.

U.S. Patent No. 9,601,236

18. On March 21, 2017, the ’236 Patent, entitled “Shielded Electrical Cable,” was duly and legally issued by the United States Patent and Trademark Office to inventor Douglas B. Gundel. A true and correct copy of the ’236 Patent is attached as Exhibit B to this Complaint.

19. The ’236 Patent issued from a continuation of the application that issued as the ’333 Patent and also relates generally to the field of electrical cables for transmitting data. The claims of the ’236 Patent are directed to shielded electrical cables with specific physical dimensions.

20. The ’236 Patent is currently in full force and effect.

21. All right, title and interest in and to the ’236 Patent have been assigned to 3M IPC, which is the sole owner of the ’236 Patent.

22. 3M Co. is the exclusive licensee of the ’236 Patent.

FIRST CLAIM FOR RELIEF
(Amphenol's Infringement of the '333 Patent)

23. Upon information and belief, Amphenol has infringed and continues to infringe, has actively and knowingly induced and continues to actively and knowingly induce infringement of one or more claims of the '333 Patent, including at least claim 5 of the '333 Patent in this District and elsewhere under 35 U.S.C. §§ 271(a) and (b).

24. Claim 5 of the '333 Patent states as follows:

> A shielded electrical cable, comprising:
>
> a plurality of differential pairs extending along a length of the cable and being arranged generally in a plane along a width of the cable, each differential pair including two insulated conductors having wire diameters not greater than 24 American Wire Gauge (AWG), each differential pair being substantially surrounded by a shield;
>
> first and second non-conductive polymeric layers disposed on opposite sides of the cable, the first and second layers including cover portions and pinched portions arranged such that, in transverse cross section, the cover portions of the first and second layers in combination substantially surround the plurality of differential pairs, and the pinched portions of the first and second layers in combination form pinched portions of the cable on each side of the plurality of differential pairs; and
>
> an adhesive layer bonding the first non-conductive polymeric layer to the second non-conductive polymeric layer in the pinched portions of the cable;
>
> wherein a transverse bending of the cable at a cable location of 90 degrees over an inner radius of at most 5 mm causes an insertion loss of the insulated conductors of the differential pairs proximate the cable location to vary by no more than 0.5 dB from an initial insertion loss measured at the cable location in an unbent configuration.

25. Amphenol's Shielded Ribbon Cables meet all the limitations of at least claim 5 of the '333 Patent.

26. The Amphenol Shielded Ribbon Cables have a plurality of differential pairs, each with two insulated conductors having a wire diameter that is not greater than 24 AWG. The differential pairs are arranged along the width of the Amphenol Shielded Ribbon Cable. Additionally, each pair is substantially surrounded by a shield.

27. The Amphenol Shielded Ribbon Cables include two non-conductive polymeric layers on opposite sides of each differential pair (a first layer on the top and a second layer on the bottom). These non-conductive polymeric layers are made of polyester or similar material. Each layer has cover portions on the top and bottom, which substantially surround the plurality of differential pairs. Each non-conductive polymeric layer also has pinched portions on each side of the plurality of differential pairs. These pinched portions are bonded together in closer proximity by an adhesive layer.

28. On information and belief, when the Amphenol Shielded Ribbon Cables are bent across the width of the cable at a 90º angle (where the bend radius is 5 mm or less), the variance in insertion loss does not exceed 0.5 dB when compared to the insertion loss measured in an unbent state.

29. Accordingly, the Amphenol Shielded Ribbon Cables meet every limitation of at least claim 5 of the ’333 Patent either literally or under the doctrine of equivalents and thus infringe at least claim 5.

30. Amphenol’s acts of infringement have been without permission, consent, authorization or license of 3M.

31. Upon information and belief, at least as of the time it received notice of this complaint, Amphenol’s inducement of infringement has been with full knowledge of the

’333 Patent and with the intention of actively inducing direct infringement by others in the United States.

32. Upon information and belief, Amphenol will continue to infringe the ’333 Patent unless and until it is enjoined by this Court.

33. Amphenol has caused and will continue to cause 3M injury and damage by infringing the ’333 Patent. 3M will suffer further irreparable injury unless and until Amphenol is enjoined from infringing the ’333 Patent.

SECOND CLAIM FOR RELIEF
(Amphenol’s Infringement of the ’236 Patent)

34. 3M incorporates as if fully stated herein the allegations of the preceding paragraphs set forth above.

35. Upon information and belief, Amphenol has infringed and continues to infringe, has actively and knowingly induced and continues to actively and knowingly induce infringement of one or more claims of the ’236 Patent, including at least claim 1 of the ’236 Patent in this District and elsewhere under 35 U.S.C. §§ 271(a) and (b).

36. Claim 1 of the ’236 Patent states as follows:

> A shielded electrical cable, comprising:
>
> a plurality of conductor sets extending along a length of the cable and arranged generally in a plane along a width of the cable, each conductor set substantially surrounded by a shield and including two insulated conductors;
>
> first and second non-conductive polymeric layers disposed on opposite sides of the cable, the first and second layers including cover portions and pinched portions arranged such that, in transverse cross section, the cover portions of the first and second layers in combination substantially surround the plurality of conductor sets, and the pinched portions of the first and second layers in combination form pinched portions of the cable on each side of the cable; and

> an adhesive layer bonding the first non-conductive polymeric layer to the second non-conductive polymeric layer in the pinched portions of the cable;
>
> wherein:
>
> > the first and second layers are spaced apart within 0.05 mm of each other in each pinched portion along the length of the cable;
> >
> > a maximum separation between the cover portions of the first and second layers is D;
> >
> > a minimum separation between the pinched portions of the first and second layers on each side of the cable is d_1, d_1/D being less than 0.25; and
> >
> > a minimum separation between the cover portions of the first and second layers in a region between the conductors of each conductor set is d_2, d_2/D being greater than 0.33.

37. Amphenol's Shielded Ribbon Cables meet all the limitations of at least claim 1 of the '236 Patent.

38. The Amphenol Shielded Ribbon Cables have a plurality of conductor sets, each including two insulated conductors. The conductor sets are arranged along a width of the Amphenol Shielded Ribbon Cables. Additionally, each conductor set is substantially surrounded by a shield.

39. The Amphenol Shielded Ribbon Cables include two non-conductive polymeric layers on opposite sides of each conductor set (a first layer on the top and a second layer on the bottom). These non-conductive polymeric layers are made of polyester or similar material. Each layer has cover portions on the top and bottom, which substantially surround the plurality of conductor sets. Each non-conductive polymeric layer also has pinched portions on each side of the plurality of conductor sets, and thereby on each side of the cable. These pinched portions are bonded together in closer proximity by an adhesive layer.

40. On information and belief, the Amphenol Shielded Ribbon Cables also meet the claimed dimensional features. The first and second layers are spaced apart no more than 0.05 mm from each other at the pinched portions. The ratio of the minimum space between the pinched portions and the maximum separation between the cover portions is less than 0.25. And the ratio of the minimum to maximum separation between the cover portions is greater than 0.33.

41. Accordingly, the Amphenol Shielded Ribbon Cables meet every limitation of at least claim 1 of the ’236 Patent either literally or under the doctrine of equivalents and thus infringe at least claim 1.

42. Amphenol’s acts of infringement have been without permission, consent, authorization or license of 3M.

43. Upon information and belief, at least as of the time it received notice of this complaint, Amphenol’s inducement of infringement has been with full knowledge of the ’236 Patent and with the intention of actively inducing direct infringement by others in the United States.

44. Upon information and belief, Amphenol will continue to infringe the ’236 Patent unless and until it is enjoined by this Court.

45. Amphenol has caused and will continue to cause 3M injury and damage by infringing the ’236 Patent. 3M will suffer further irreparable injury unless and until Amphenol is enjoined from infringing the ’236 Patent.

PRAYER FOR RELIEF

WHEREFORE, 3M respectfully prays for judgment as follows:

a) Judgment that Amphenol has infringed one or more claims of each of the ’333 Patent and the ’236 Patent;

b) Preliminarily and permanently enjoining Amphenol and its officers, agents, servants, employees, attorneys, and all persons in active concert or participation with any of them, from further infringement of the ’333 Patent and the ’236 Patent;

c) An award to 3M of damages adequate to compensate it for all infringement occurring through the date of judgment, with prejudgment interest, and for any supplemental damages as appropriate and post-judgment interest after that date;

d) An award of enhanced damages for willful infringement as permitted by law;

e) A finding that Amphenol’s conduct and therefore this action for infringement represent an exceptional case under 35 U.S.C. § 285 and an award of reasonable attorney fees and costs; and

f) An award of such other and further relief as the Court may deem just and proper.

DEMAND FOR TRIAL BY JURY

Pursuant to Federal Rule of Civil Procedure 38(b), 3M hereby demands a trial by jury of all issues so triable.

MORRIS, NICHOLS, ARSHT & TUNNELL LLP

/s/ Rodger D. Smith II

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